

FIGURE 1

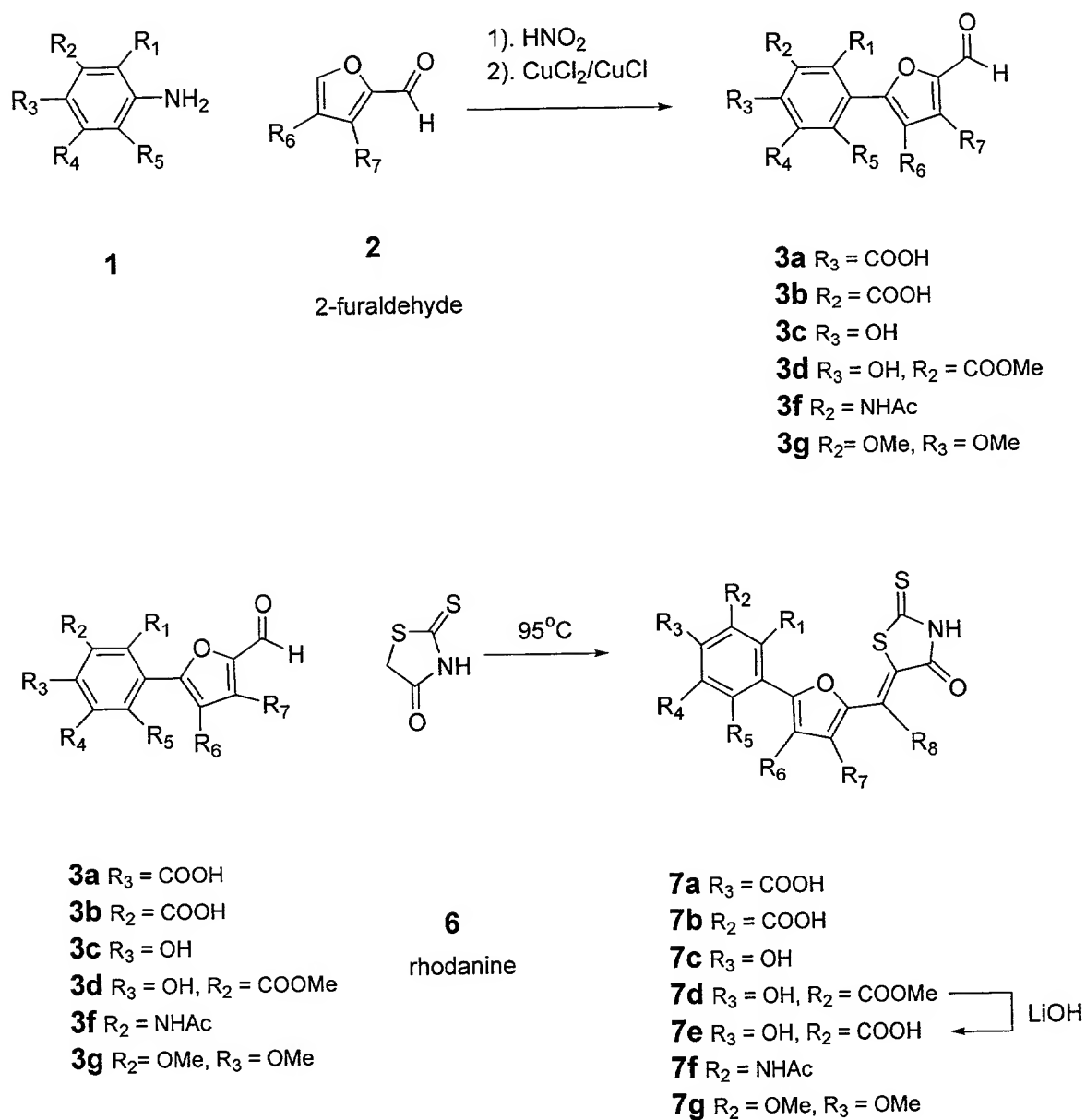


FIGURE 2

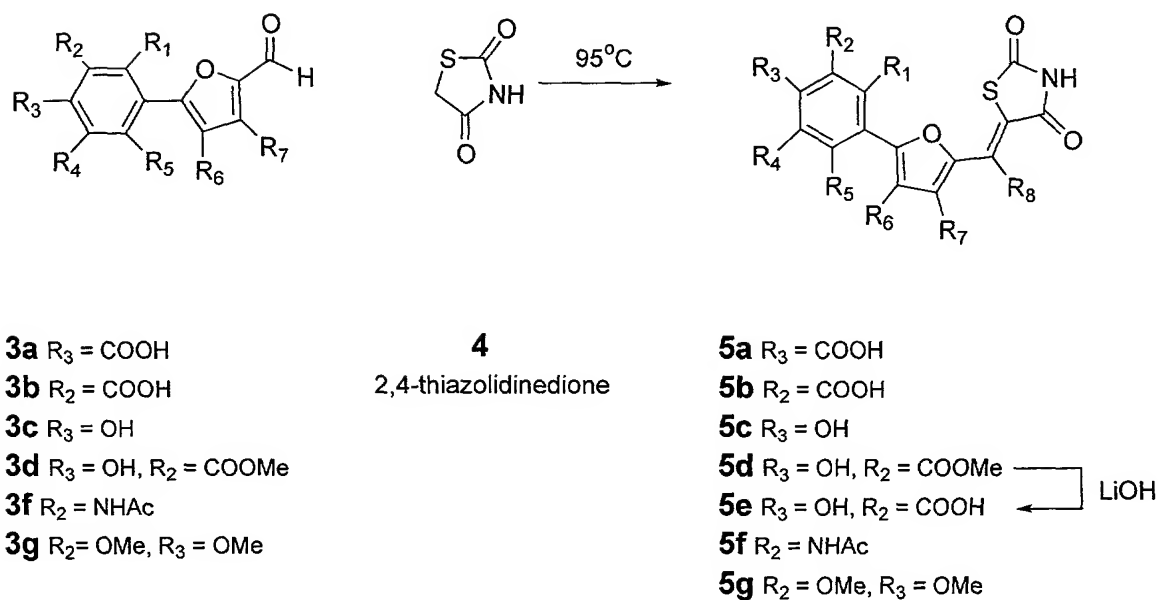
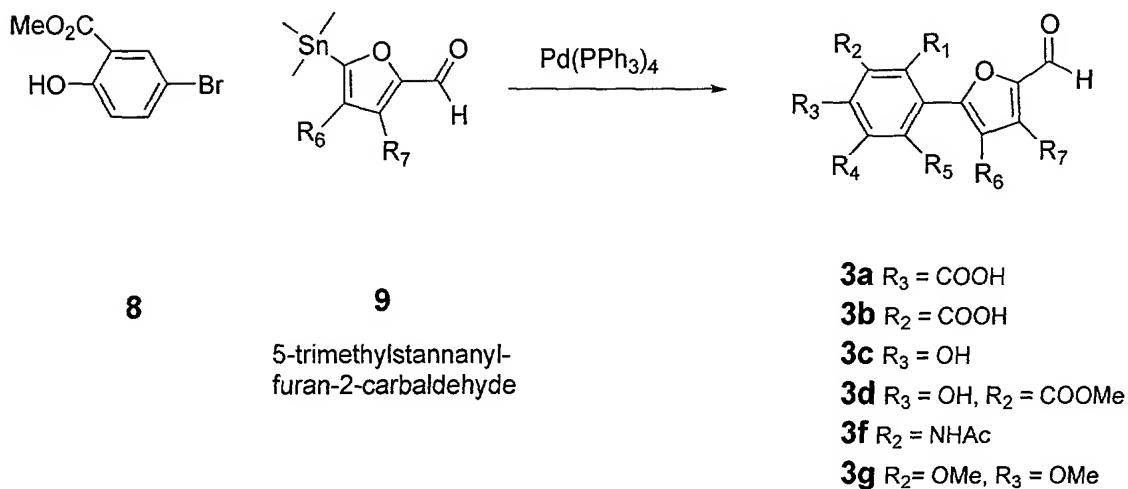


FIGURE 3

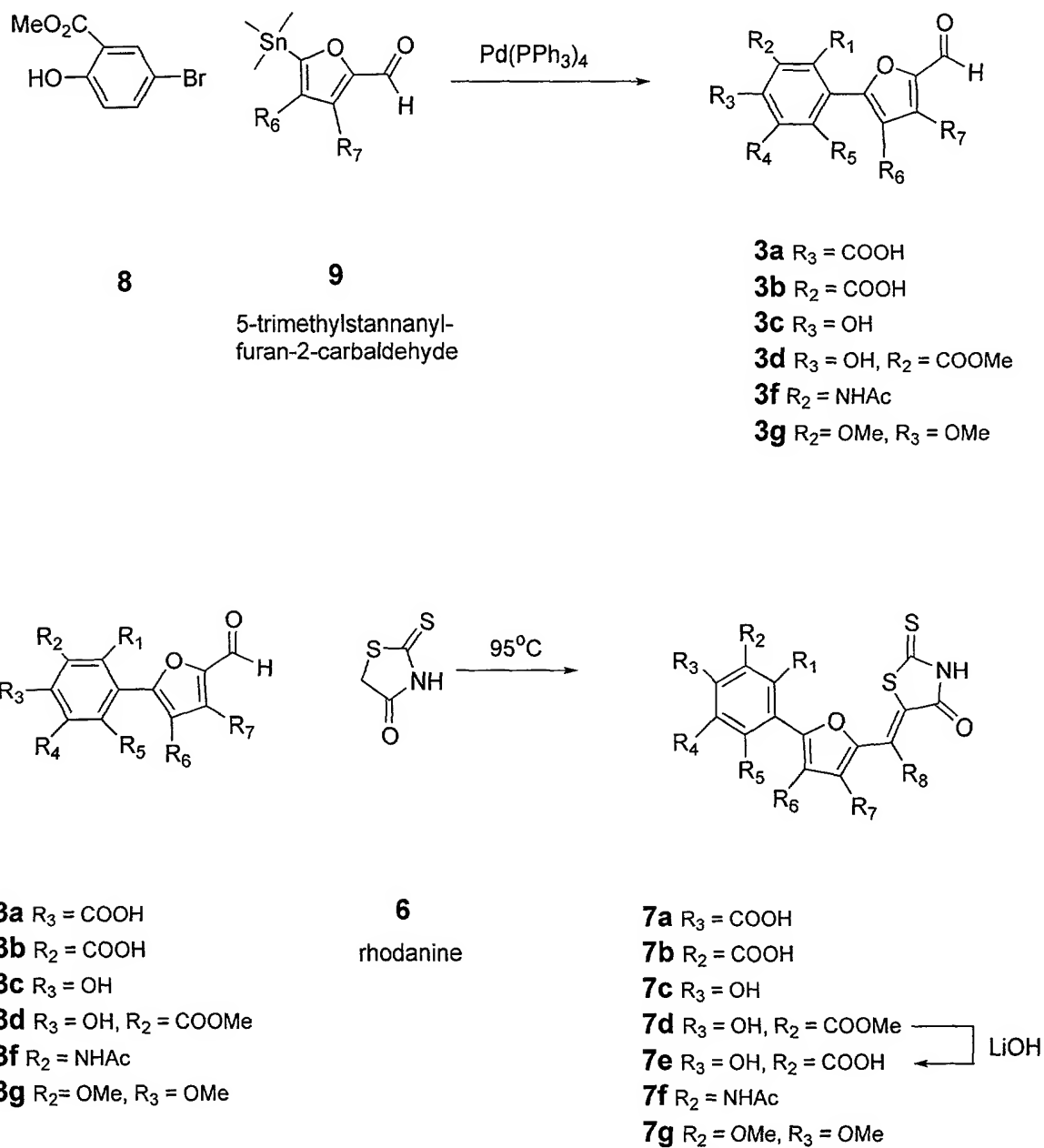


FIGURE 4

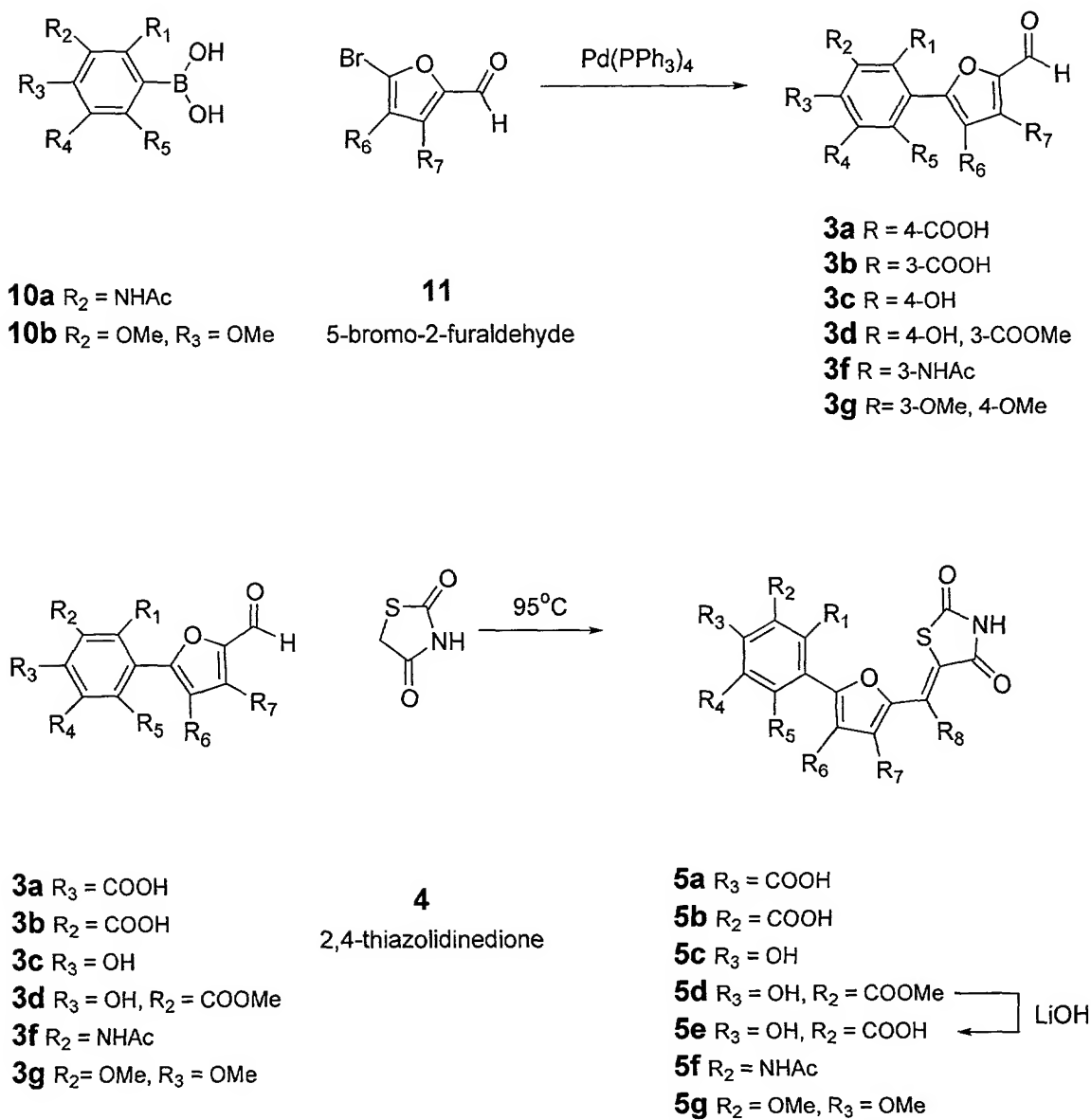
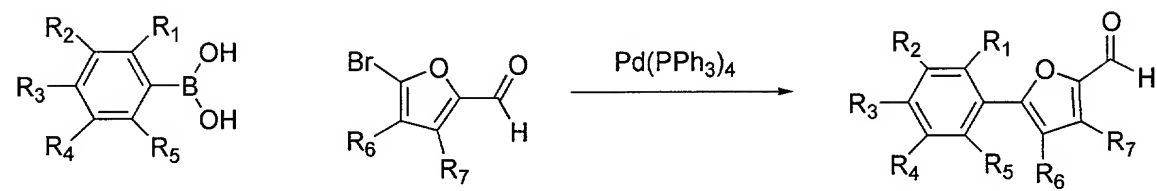
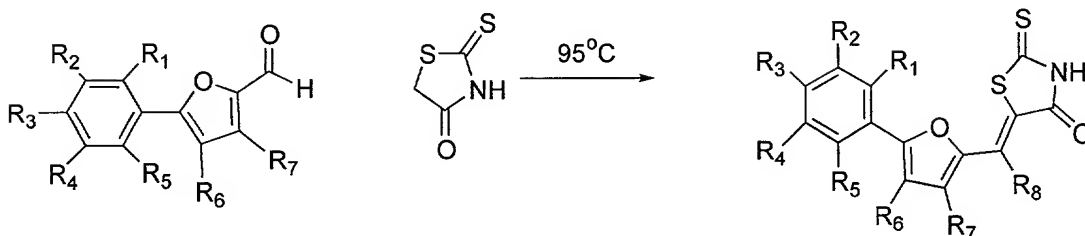


FIGURE 5

**10a**  $R_2 = \text{NHAc}$ **10b**  $R_2 = \text{OMe}, R_3 = \text{OMe}$ **11**

5-bromo-2-furaldehyde

**3a**  $R = 4\text{-COOH}$ **3b**  $R = 3\text{-COOH}$ **3c**  $R = 4\text{-OH}$ **3d**  $R = 4\text{-OH}, 3\text{-COOMe}$ **3f**  $R = 3\text{-NHAc}$ **3g**  $R = 3\text{-OMe}, 4\text{-OMe}$ **3a**  $R_3 = \text{COOH}$ **3b**  $R_2 = \text{COOH}$ **3c**  $R_3 = \text{OH}$ **3d**  $R_3 = \text{OH}, R_2 = \text{COOMe}$ **3f**  $R_2 = \text{NHAc}$ **3g**  $R_2 = \text{OMe}, R_3 = \text{OMe}$ **6**

rhodanine

**7a**  $R_3 = \text{COOH}$ **7b**  $R_2 = \text{COOH}$ **7c**  $R_3 = \text{OH}$ **7d**  $R_3 = \text{OH}, R_2 = \text{COOMe}$ **7e**  $R_3 = \text{OH}, R_2 = \text{COOH}$ **7f**  $R_2 = \text{NHAc}$ **7g**  $R_2 = \text{OMe}, R_3 = \text{OMe}$ 

LiOH

FIGURE 6

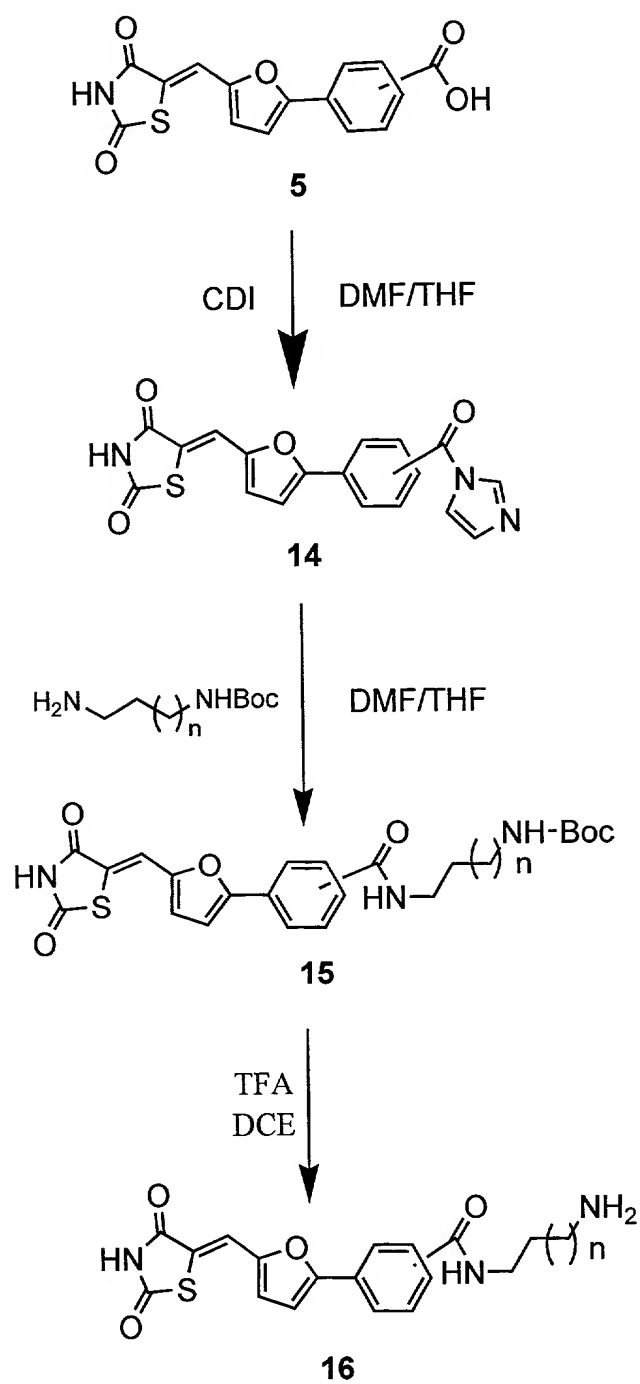


FIGURE 7

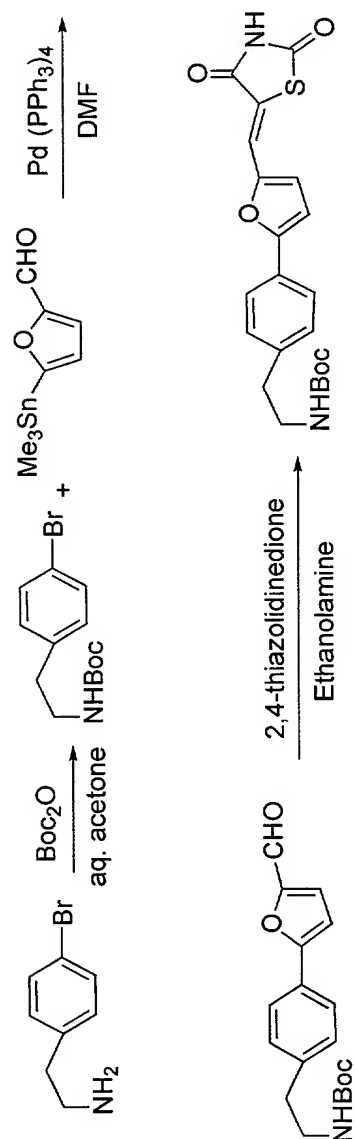


FIGURE 8



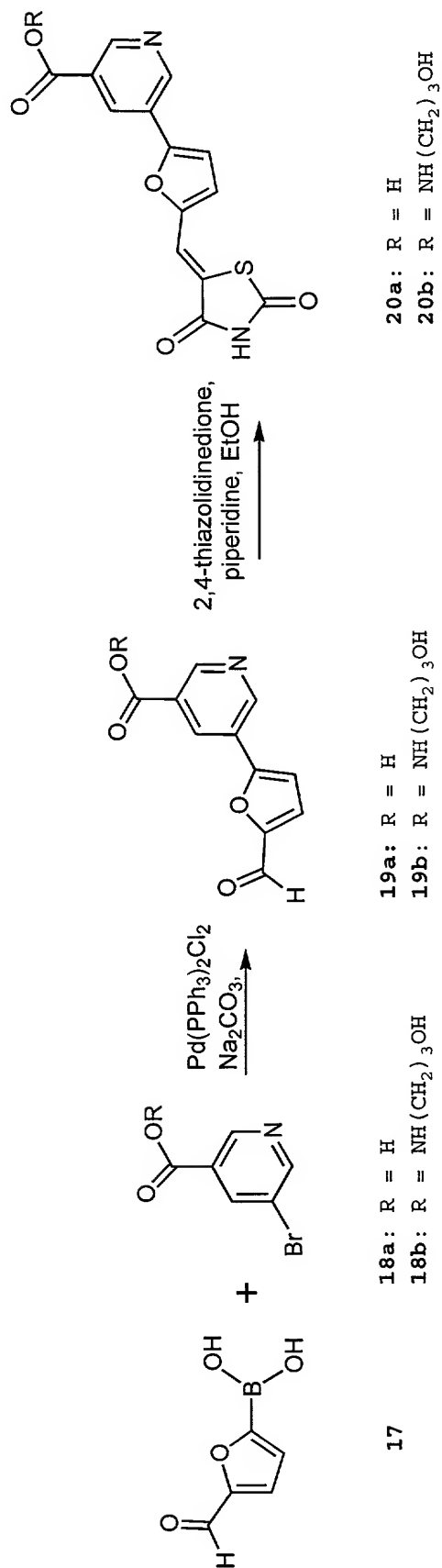


FIGURE 9

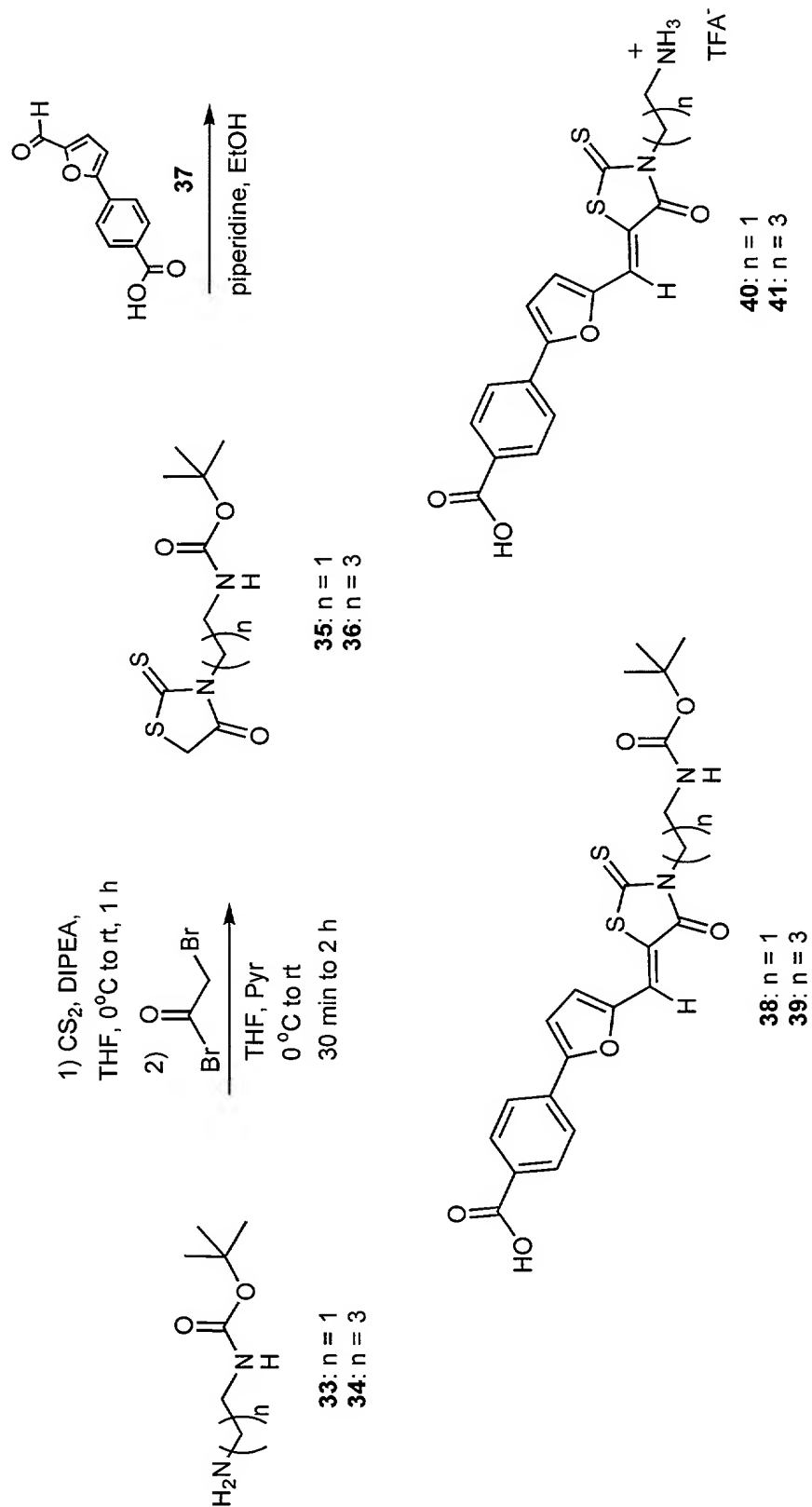


FIGURE 10

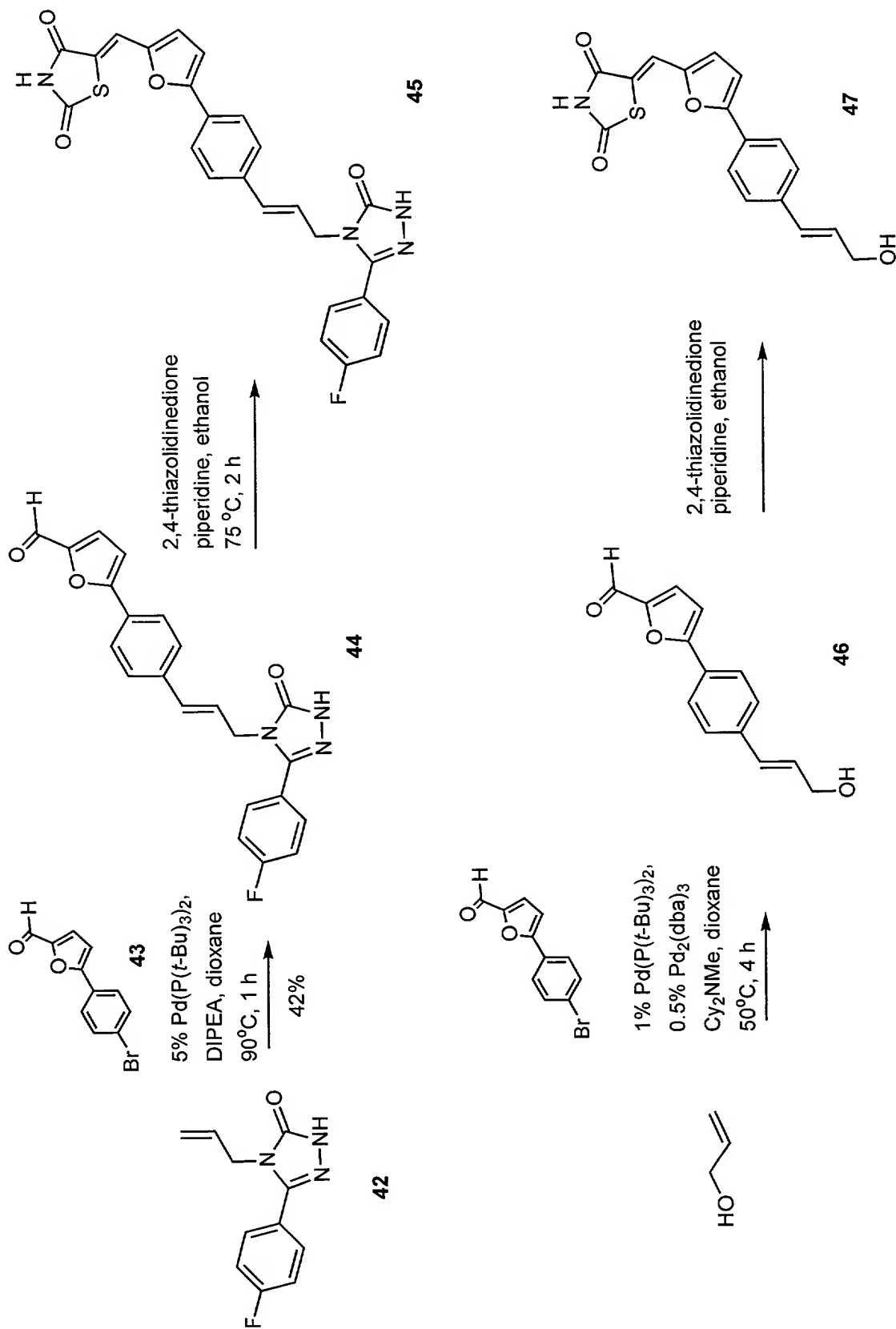
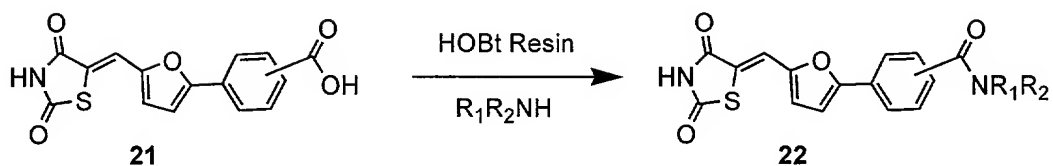
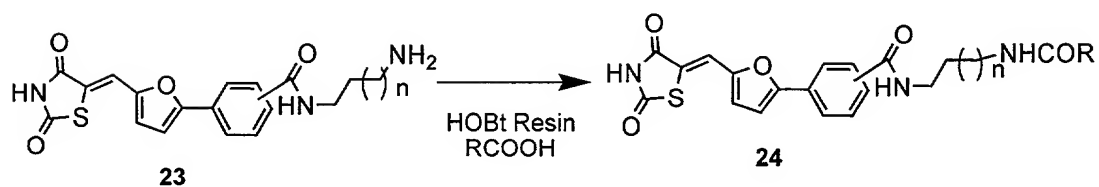
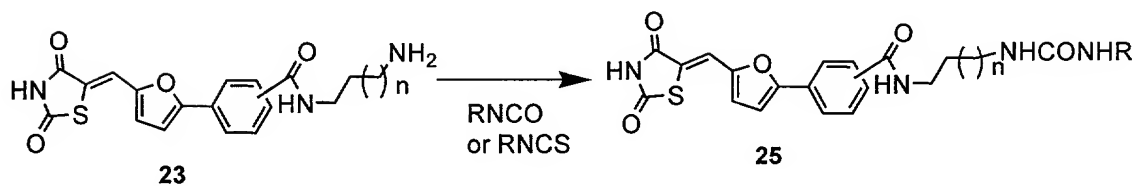


FIGURE 11

**FIGURE 12a****FIGURE 12b****FIGURE 12c**

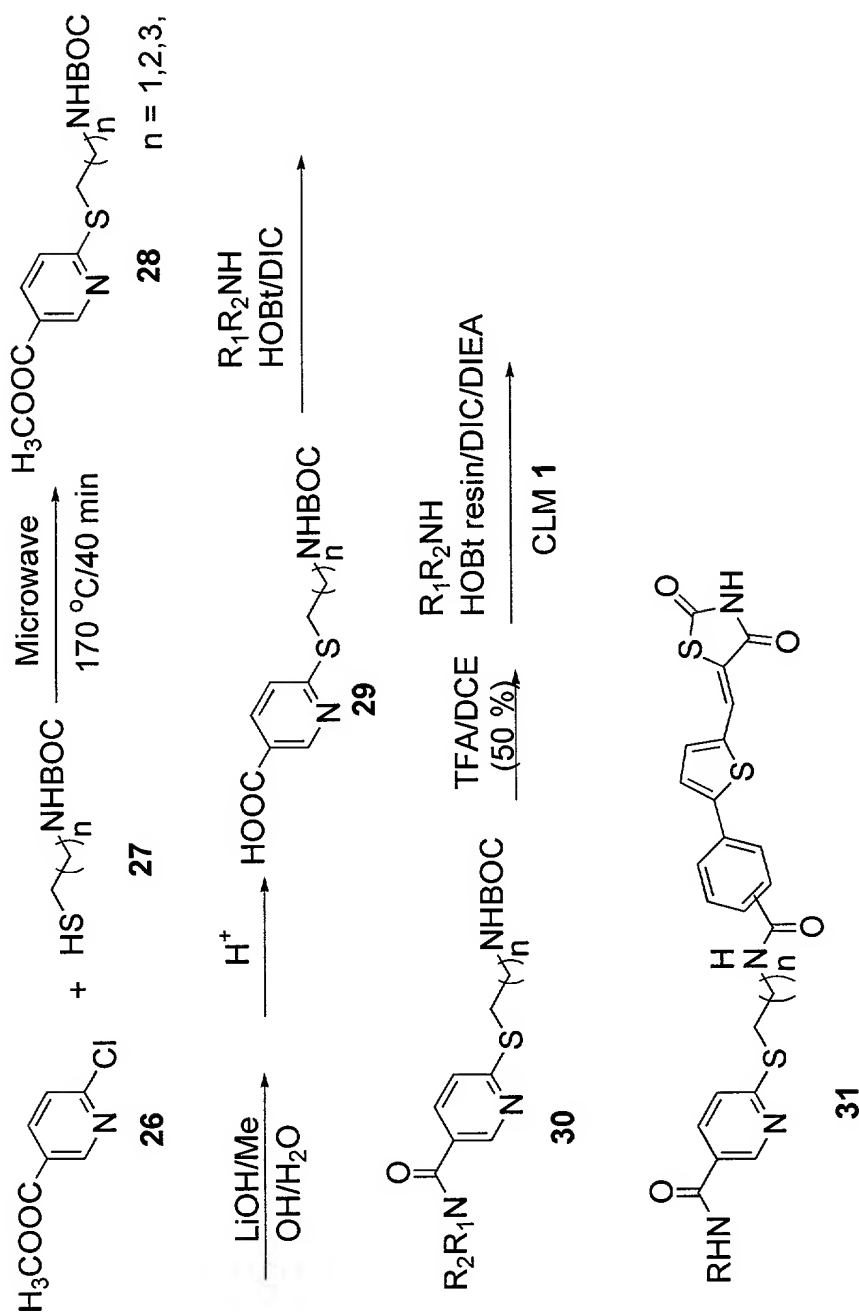


FIGURE 13

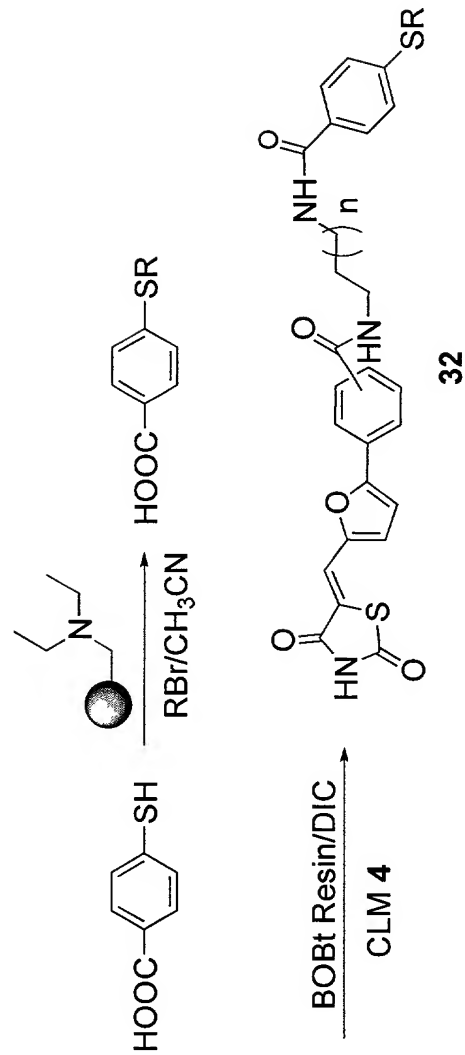


FIGURE 14

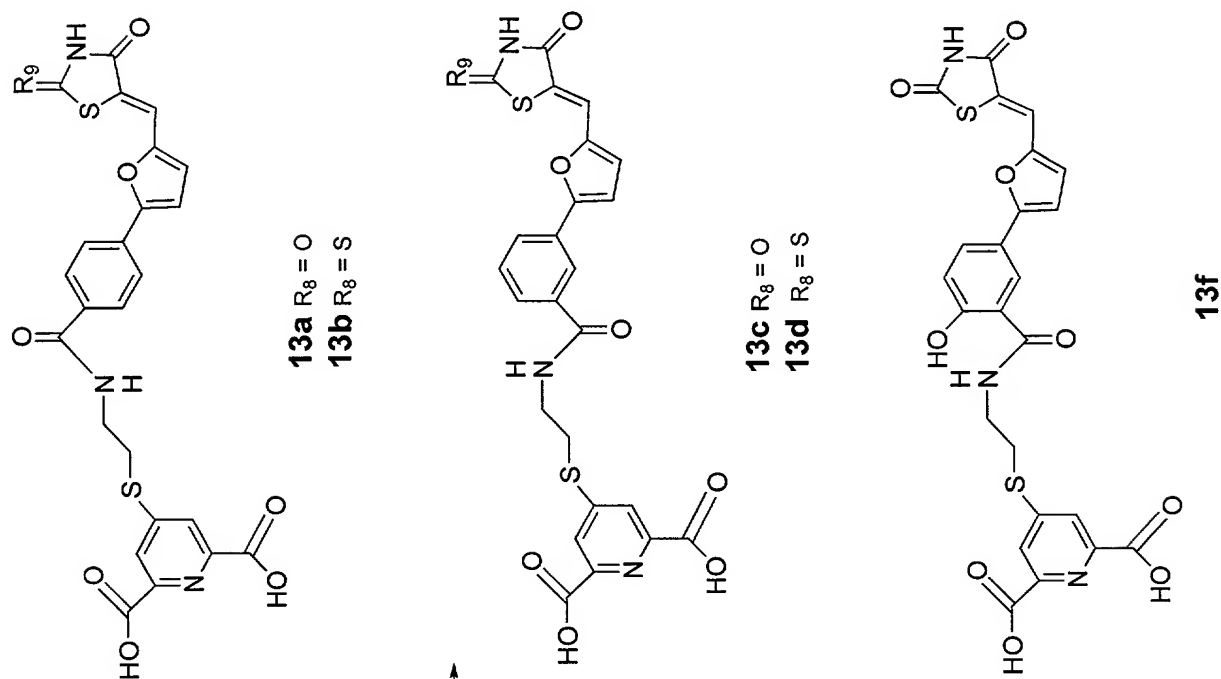
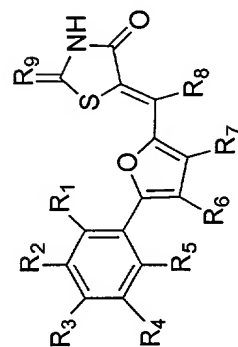
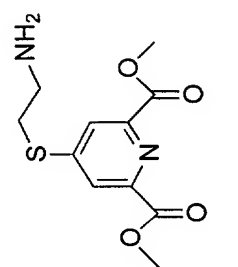


FIGURE 15



**5a**  $R_3 = COOH, R_9 = O$

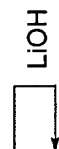
**7a**  $R_3 = COOH, R_9 = S$

**5b**  $R_2 = COOH, R_9 = O$

**7b**  $R_2 = COOH, R_9 = S$

**5d**  $R_3 = OH, R_2 = CO_2Me, R_9 = O$

**5e**  $R_3 = OH, R_2 = CO_2H, R_9 = O$



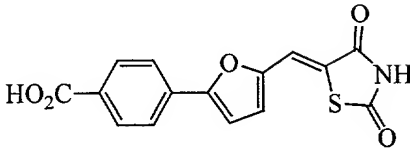
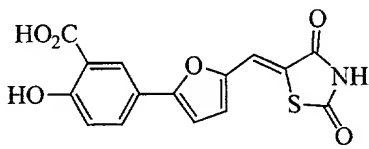
	5a	5e
Structure		
DHPR IC <sub>50</sub>	> 200 μM	> 200 μM
LDH IC <sub>50</sub>	Not tested	46 μM
ADH IC <sub>50</sub>	116 μM	21 μM
DHFR IC <sub>50</sub>	> 75 μM	Not tested
DOXPR IC <sub>50</sub>	> 200 μM	> 100 μM
GAPDH IC <sub>50</sub>	> 200 μM	> 200 μM
IPMDH IC <sub>50</sub>	Not tested	> 50 μM
IMPDH IC <sub>50</sub>	> 200 μM	2.15 μM
AR IC <sub>50</sub>	2.26 μM	No inhibi-tion
HMGCoAR IC <sub>50</sub>	49.3 μM	245 nM

FIGURE 16



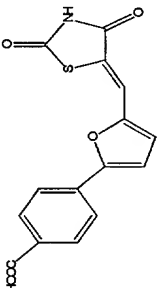
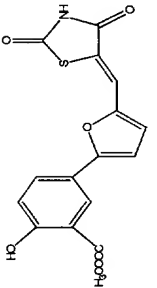
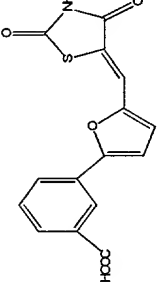
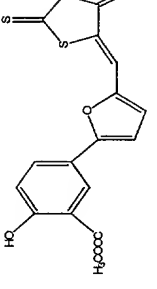
Structure				
HMGCoAR	1.75 $\mu$ M	245 nM	> 400 $\mu$ M	143 nM
IMPDH	58.8 $\mu$ M	2.15 $\mu$ M	No inhibition	Not tested
DOXPR	52.2 $\mu$ M	> 100 $\mu$ M	> 400 $\mu$ M	1.6 $\mu$ M
DHPR	> 150 $\mu$ M	> 200 $\mu$ M	> 400 $\mu$ M	2.1 $\mu$ M
DHFR	No inhibition	No inhibition	> 400 $\mu$ M	4.3 $\mu$ M
IPMDH	> 200 $\mu$ M	> 50 $\mu$ M	Not tested	Not tested
GAPDH	> 100 $\mu$ M	> 200 $\mu$ M	> 400 $\mu$ M	Not tested
AR	4.1 $\mu$ M	No inhibition	Not tested	Not tested
ADH	140 $\mu$ M	21 $\mu$ M	Not tested	3.4 $\mu$ M
LDH	Not tested	46 $\mu$ M	Not tested	340 nM

FIGURE 17

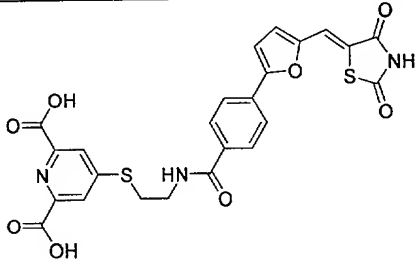
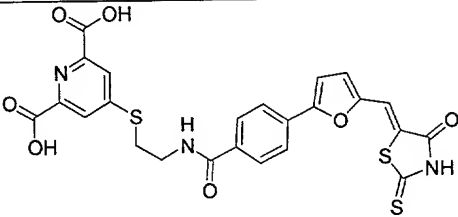
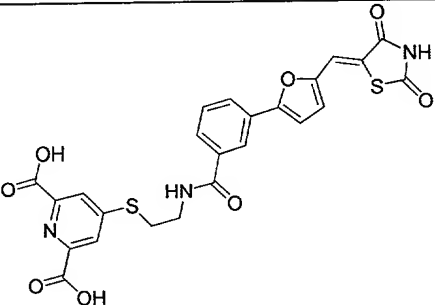
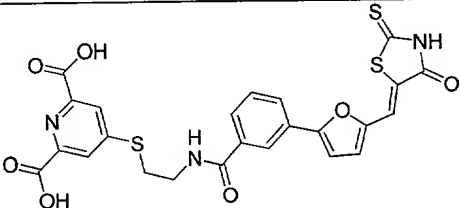
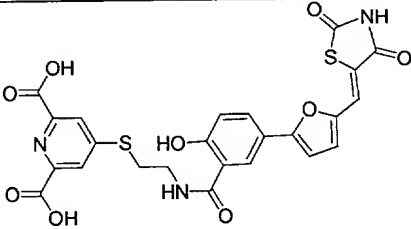
Compound	Chemical structure	IC <sub>50</sub> for DHPR (μM)
13a		0.536
13b		7.1
13c		13.0
13d		0.254
13f		4.91

FIGURE 18

Compound #	Compound Name	Structure
5a	4-[5-(2,4-dioxo-thiazolidin-5-ylidenemethyl)-furan-2-yl]benzoic acid	
5b	3-[5-(2,4-dioxo-thiazolidin-5-ylidenemethyl)-furan-2-yl]benzoic acid	
5c	5-[5-(4-hydroxy-phenyl)-furan-2-ylmethylene]-thiazolidine-2,4-dione	
5d	5-[5-(2,4-dioxo-thiazolidin-5-ylidenemethyl)-furan-2-yl]-2-hydroxy-benzoic acid methyl ester	
5e	5-[5-(2,4-dioxo-thiazolidin-5-ylidenemethyl)-furan-2-yl]-2-hydroxy-benzoic acid	

FIGURE 19a

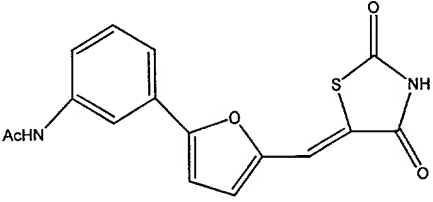
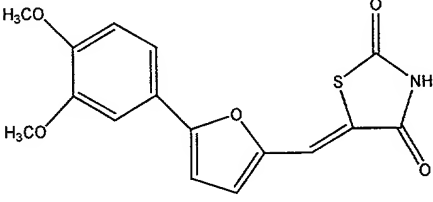
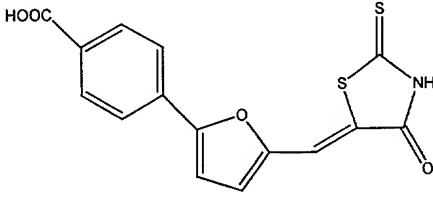
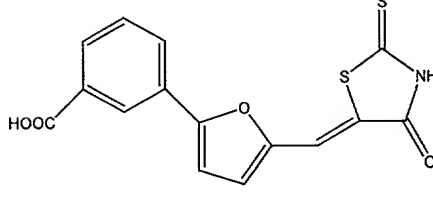
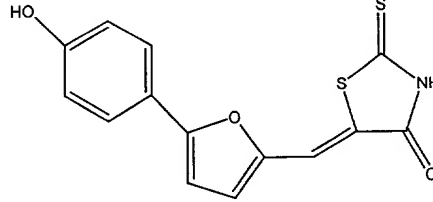
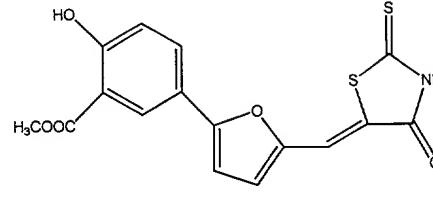
<b>5f</b>	N-{3-[5-(2,4-dioxo-thiazolidin-5-ylidenemethyl)-furan-2-yl]phenyl}acetamide	
<b>5g</b>	5-[5-(3,4-dimethoxy-phenyl)-furan-2-ylmethylene]-thiazolidine-2,4-dione	
<b>7a</b>	4-[5-(4-oxo-2-thioxo-thiazolidin-5-ylidenemethyl)-furan-2-yl]benzoic acid	
<b>7b</b>	3-[5-(4-oxo-2-thioxo-thiazolidin-5-ylidenemethyl)-furan-2-yl]benzoic acid	
<b>7c</b>	5-[5-(4-hydroxy-phenyl)-furan-2-ylmethylene]-2-thioxo-thiazolidin-4-one	
<b>7d</b>	2-hydroxy-5-[5-(4-oxo-2-thioxo-thiazolidine-5-ylidenemethyl)-furan-2-yl]-2-benzoic acid methyl ester	

FIGURE 19b

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<b>7e</b>	2-hydroxy-5-[5-(4-oxo-2-thioxo-thiazolidine-5-ylidenemethyl)-furan-2-yl]-2-benzoic acid	
<b>7f</b>	N-{3-[5-(4-oxo-2-thioxo)-thiazolidin-5-ylidenemethyl)-furan-2-yl]phenyl}acetamide	
<b>7g</b>	5-[5-(3,4-dimethoxyphenyl)-furan-2-ylmethylene]-2-thioxo-thiazolidin-4-one	

FIGURE 19c

2025-05-23 10:23:00

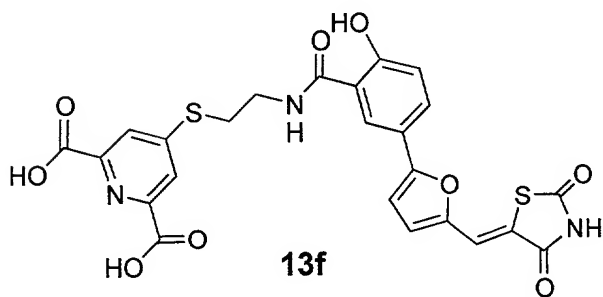
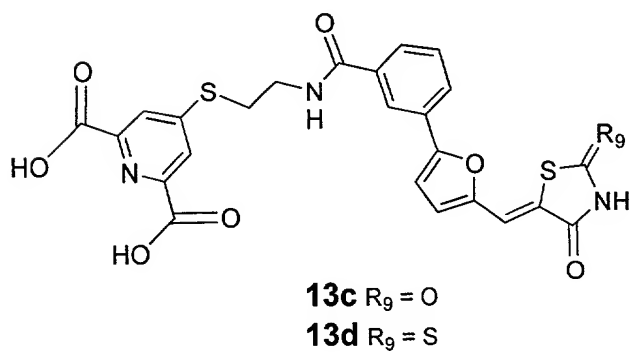
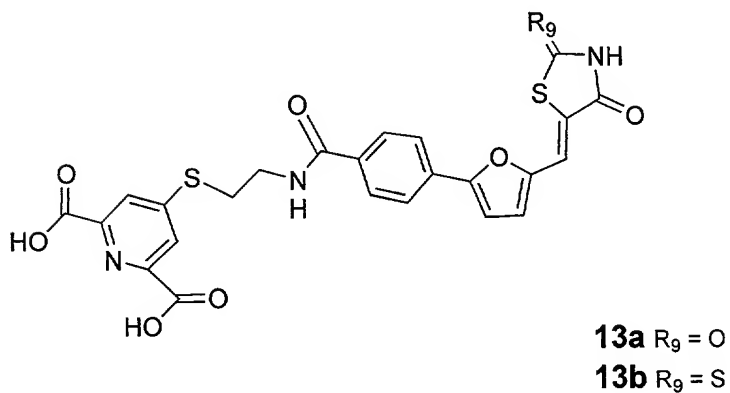


FIGURE 20